SHILYAYEVA, V. V.

"Investigation of the Copolymerization Reaction of Styrole With Certain Fatty Acids and Triglyceride Vegetable Oils." Cand Tech Sci, Moscow Order of Lenin Chemicotechnological Inst imeni D. I. Mendeleyev, 29 Dec 54. (VM, 21 Dec 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (12)
SO: Sun. No. 559, 24 Jun 55

95-11-13/14

AUTHOR: Shneyderova, V. V., Candidate of Technical Sciences.

TITLE: Non-metal Insulating Covers for Reinforced Concrete Petroleum Products Storage Tanks (Nemetallicheskiye izolyatsionnyye pokrytiya dlya zhelezobetonnykh khranilishch pod nefteprodukty)

PERIODICAL: Stroitel'stvo Predpriyatiy Neftyanoy Promyshlennosti, 1957, Nr 11, pp. 30-31 (USSR)

ABSTRACT: Experience has shown that using reinforced concrete containers instead of steel containers is justifiable also for economic reasons. Investigations carried out of the various types of super-concrete of high density without any additional insulating covering have shown that these containers may be used for gasoline etc. to be used immediately, but not for the permanent storage of this product.
In foreign publications the following composition is mentioned as having been subjected to thorough tests in the course of four years. The base on the concrete three-layer covering on a basis of Thiokol-Latex WD-7, reinforced by wire glass; outer covering-four layers on a base of "Usilon", on which the aluminum foil is, in addition, fastened by means of a special adhesive.
The new types of tar developed in the course of recent years are the "Epoxis"-tars, on the base of which coverings that were particularly resistant to aggressive substances gave satisfactory results.

Card 1/2

95-11-13/14

Non-metal Insulating Covers for Reinforced Concrete Petroleum Products Storage Tanks

After non-metallic coverings for naphta-resistant concrete surfaces had been investigated in USSR laboratories, four types of these coverings were selected for the purpose of investigation under field conditions. The results of these further investigations are shown in form of a table. There are 1 table and 10 non-Slavic references.

AVAILABLE: Library of Congress

Card 2/2

SHNEYDEROVA, V.V., kand. tekhn. nauk.

Coatings from a copolymer of vinylidene chloride and vinyl chloride. Stroi. pred. neft. prom. 3 no.4:11-13 Ap '58. (MIRA 11:5)
(Protective coatings) (Tanks) (Vinyl compounds)

SHNEYDEROVA, V.V.

Rapid method for determining the resistance to gasoline of lacquer and other film-forming materials. Lakokras.mat.i ikh prim. no.5:73-74 '60. (MIRA 13:11)

(Protective coatings)

SHNEYDEROVA, V.V.; PRONYAKOVA, V.M.; TYUNTINA, Z.Ya.

Testing the durability of insulating lacquer paints and film coatings protecting ferroconcrete surfaces from crack formation. Lakokras.mat.i ikh prim. no.5:74-75 '60. (MIRA 13:11)
(Protective coatings—Testing)

PRONYAKOVA, V.M.; SHNEYDEROVA, V.V.

Rapid method for the qualitative determination of benzene permeability of lacquer-paint coatings on concrete. Lakokras. mat. i ikh prim. no.5:69 '61. (MIRA 15:3)
(Permeability) (Protective coatings)

S/852/62/000/000/003/020
B107/B107

AUTHORS: Raspopova, L. V., Shneyderova, V. V.

TITLE: New Thiokol lattices and coatings resistant to gasoline and oil on their basis

SOURCE: Primeneniye polimerov v antikorrozionnoy tekhnike. Ed. by I. Ya. Klinov and P. G. Udyma. Moscow, Mashgiz, 1962. Vses. sovet nauchno-tekhn. obshchestv. 44 - 47

TEXT: A new aqueous dispersion T-50 (T-50) of Thiokol was developed by the VNIIST to make reinforced concrete containers impervious to petroleum products. T-50 was produced by polycondensation of a mixture of dichloroethane and 1,2-dichloropropane with sodium tetrasulfide, desulfonation with sodium hydroxide solution on heating, and again polycondensation of the dichlorides with the resulting polysulfides. The product has a Karrer elasticity of 0.33 and a total sulfur content of 72 %. Coatings of T-50-based varnish dry at 18 - 20°C. The following forms were developed by the VNIIST: (1) Elastic latex base consisting of two layers, with Portland cement as a filler to be trowelled on, and 2 - 5 layers latex without filler. The first layer trowelled on can be reinforced with a glass fiber

Card 1/2

New Thiokol lattices and ...

up to 0.1 mm thick. This base is impermeable to petroleum products free from aromatic hydrocarbons. For the storage of light-colored petroleum products containing aromatic hydrocarbons, the base has to be coated with several layers of oil-resistant enamel. (2) Coatings of aqueous T-50 Thiokol dispersion for which four-layered enamel coatings are used. The latter consist of copolymers of vinylidene chloride with vinyl chloride and a crylonitrile (ЭХЭ-4023 (VKhE-4023), ОХС-7 (OKhS-7) enamels, etc.). Reinforcement with glass fabric improves the adhesion of such coatings on concrete, their tensile strength and their resistance to oil. This method was field-tested with 8 gasoline containers. Finally, the importance of this method is emphasized and the industrial production of T-50 is recommended.

Card 2/2

SHNEYDEROVA, V.V.

Studying the reaction of the copolymerization of styrene with linolic acid. Lakokras.mat. i ikh prim. no.4:33-34 '62.
(MIRA 16:11)

KONOVALOV, Petr Gordeyevich; ZHEBROVSKIY, Vatslav Vatslavovich; SHNEYDEROVA, Vera Vladimirovna; SOROKIN, M.F., retsenzent; LYALYUSHKO, K.A., retsenzent; YAKUBOVICH, S.V., retsenzent; ROGOVIN, Z.A., retsenzent; SOKOLOVA, N.A., red.

[Laboratory work on the chemistry of film-forming substances and on the technology of coatings and paints] Laboratornyi praktikum po khimii plenkoobrazuiushchikh i po tekhnologii lakov i krasok. IAroslavl', Rosvuzizdat, 1963. 202 p. (MIRA 17:5)

L 25790-65 EWT(m)/EPF(c)/EWP(j) Pc-4/Pr-4 RM

ACCESSION NR: AR4040354 S/0081/64/000/006/S048/S049

SOURCE: Ref. zh. Khimiya, Abs. 6S299

AUTHOR: Liberova, R. A.; Dubasova, L. M.; Shneyderova, V. V.

TITLE: Gasoline- and water-resistant film material for the insulation of ferroconcrete storage tanks

CITED SOURCE: Nauchno-issled. tr. Vses. n.-i. in-t plenochn. materialov i iskusstv. kozhi, sb. 14, 1963, 117-126

TOPIC TAGS: polymer film, polymer insulation, water resistant polymer, gasoline resistant polymer, gasoline storage, film stability, film strength, synthetic rubber, polyvinyl chloride, butadiene nitrile rubber, insulating film, epoxy resin, polymer stabilizer, polymer welding, polymer adhesive

TRANSLATION: For the internal insulation and sealing of ferroconcrete storage tanks intended for the storage of petroleum products, a highly elastic film material with a thickness of 0.4-0.5 mm, based on polyvinylchloride and butadiene-nitrile rubber was developed by mixing them on rollers at 105-120C followed by hot pressing at 140-145C for 10 minutes at a pressure of 30 kg/cm^2. Various propor-

Card 1/2

L 25790-65

ACCESSION NR: AR4040354

tions of the PB-1, PF-1, PF-4 and Igelit P brands of polyvinylchloride and SKN-26 or SKN-40 synthetic rubber were studied. Pb silicate, Ca stearate, PbO and epoxy resins ED-5 and ED-6 were added to stabilize the polyvinylchloride. The best gasoline- and water-resistance and physicomechanical properties were provided by PF-1 and PB-1 polyvinylchloride and SKN-40 rubber with the addition of 3 parts PbO per 100 parts polyvinylchloride. The optimal film material properties were obtained at a polyvinylchloride: rubber ratio of 2:1. The film material could be readily welded by various methods (thermal and high frequency) and could be glued with an adhesive based on perchlorovinyl resin mixed with SKN-40 rubber which had been dissolved in a mixture of organic solvents. The film material containing a 2:1 ratio of polyvinylchloride and SKN-40 withstood tests for gasoline- and water-resistance under field conditions. L. Kotlyarevskaya

SUB CODE: MT, FP ENCL: 00

Card 2/2

MOSHCHANSKIY, N.A., doktor tekhn.nauk, prof.; ZOLOTNITSKIY, I.M., kand.tekhn.nauk; SOLOMATOV, V.I.; SHNEYDEROVA, V.V.; KOSYAKINA, Z.K., red.; KASIMOV, D.Ya., tekhn.red.

[Plastics and synthetic resins in anticorrosion technology] Plastmassy i sinteticheskie smoly v protivokorrozionnoi tekhnike. [By] N.A.Moshchanskii i dr. Moskva, Izd-vo lit-ry po stroit., 1964. 136 p. (MIRA 17:3)

L 25454-66 EWP(j)/EWT(m)/T RM/WE/GS

ACC NR: AT6011824 (A) SOURCE CODE: UR/0000/64/000/000/0087/0098

AUTHOR: Shneyderova, V. V.

ORG: none

TITLE: Paint and varnish coatings for concrete

SOURCE: Moscow. Veesoyuznyy zaochnyy politekhnicheskiy institut. Sbornik statey, no. 32, 1964. Sbornik statey Khimiko-tekhnologicheskogo fakul'teta, 87-98

TOPIC TAGS: concrete, plastic coating, protective coating

ABSTRACT: The properties of paint and varnish coatings for concrete surfaces were investigated. The permeability of the following resins and varnishes to gasoline and their stability in that medium as well as in water were studied: perchlorovinyl resin, ethinol varnish, polysulfide resins, phenol-furyl-acetal varnishes, vinylidenechloride-chlorovinyl-acrylonitrile copolymers, epoxy resins, and polyethylene. The experimental procedure for the determination of the stability in gasoline is described by V. V. Shneyderova (Uskorennyy metod opredeleniya benzostoykosti lakokrasochnykh i drugikh plenochnykh materialov. Lakokrasochnyye materialy i ikh primeneniye, 1960, No. 5). Schematics for the experimental installations are presented, and the experimental results are summarized in graphs and tables (see Fig. 1). It is possible to synthesize polymeric coatings for concrete which are stable in gasoline. Special coatings may be developed which are impervious to gasoline, but their application

Card 1/2

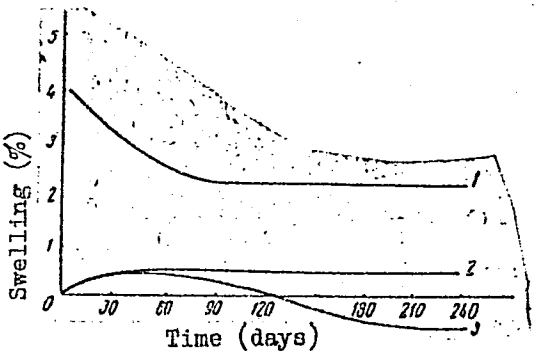

Fig. 1. Change in stability of vinylidene-chloride-chlorovinyl copolymer coatings in organic solvents. 1 - gasoline; 2 - kerosene; 3 - diesel fuel.

requires low temperatures and long drying periods, rendering their use impractical. Orig. art. has: 4 tables and 6 figures.

SUB CODE: 11/ SUBM DATE: 12Mar64/ ORIG REF: 004

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549820003-9"

SHNEYDEROVICH, M.G., kandidat meditsinskikh nauk (Moscow)

Significance of temperature curves in clinical aspects of internal diseases. Med.sestra no.10:6-12 O '55 (MLRA 8:12)
(BODY TEMPERATURE)

SHNEYDEROVICH, M.G., kandidat meditsinskikh nauk (Moskva)

Hypertension. Med.sestra 15 no.9:12-16 S '56. (MIRA 9:11)
(HYPERTENSION)

SHNEYDEROVICH, M.G.

Clinical aspects of blood circulation disorders in the mesenteric vessels. Kardiologiia 4 no.3:78-79 My-Je '64.

(MIRA 18:4)

1. Terapevtivheskoye otdeleniye (zav. - kand.med.nauk M.G. Shneyderovich) Gorodskoy bol'nitsy No.51 (glavnyy vrach N.F. Kravchuk), Moskva.

"Calculation of Disks for Creep." Thesis for degree of Cand. Technical Sci. Sub 16 May 50, Moscow Aviation Technological Inst.

Summary 71, 4 Sep 50, Dissertations Presented for Degree in Science and Engineering in Moscow in 1950, From Vechernyaya Moskva. Jan-Dec. 1950.

SERENSEN, S. V.; SHNEYDEROVICH, R. M.

Strength of Materials.

Load capacity and strength of parts during static and changing stresses (continued), Vest. mash., 32, no. 4, 1952.

Monthly List of Russian Accessions, Library of Congress, October 1952. UNCLASSIFIED.

SERENSEN, S.V.; KOGAYEV, V.P.; KOZLOV, L.A.; SHNEYDEROVICH, R.M.; RESHETOV, D.N., doktor tekhnicheskikh nauk, professor, retsenzent; TRAPEZIN, I.I., kandidat tekhnicheskikh nauk, redaktor; KARGANOV, V.G., inzhener, redaktor graficheskikh rabot; POPOVA, S.M., tekhnicheskiy redaktor

[Bearing capacity and strength calculations of machine parts] Nesushchaia sposobnost' i raschety detalei mashin na prochnost'. Pod red. S.V.Serensena. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroitel'noi lit-ry, 1954. 208 p. (MLRA 8:4)
(Strength of materials) (Machinery) (Strains and stresses)

USSR/Miscellaneous - Book review

Card 1/1 : Pub. 128 - 35/38

Authors : Groman, M. B., and Shneyderovich, R. M.

Title : Book review

Periodical : Vest. mash. 9, 103-106, Sep 1954

Abstract : A critical review is presented of D. I. Berenov's book, "The Stress Analysis of Machines," published by "Mashgiz" in 1953.

Institution : .....

Submitted : .....

SHNEYDEROVICH, R.M.

USSR/Miscellaneous---machine construction

Card 1/1

Author : Shneiderovich, R. M., Cand. in Tech. Sciences

Title : Calculations made for disks and computation of their plastic deformation

Periodical : Vest. mash. 34/3, 14-20, Mar/1954

Abstract : Computations in the field of plasticity made for disks, make it possible to judge their supporting strength, their residual strain, etc. Equations covering plasticity are given for revolving disks. The equations obtained for the plasticity of a disk, subject to deformation, make it possible to solve the general problem of the supporting capacity, strain, and deformation of a disk of varying profile when there is a temperature gradient and paramcters of plasticity, dependent on temperature. Four references, 3 Russian, latest 1951, one Swedish, 1936. Graphs.

Institution : .....

Submitted : .....

AL'SHITS, I.Ya., kandidat tekhnicheskikh nauk; BABKIN, S.I., kandidat tekhnicheskikh nauk; BALAKSHIN, B.S., doktor tekhnicheskikh nauk, professor; BEYSEL'MAN, R.D., inzhener; BELYAYEV, V.H., kandidat tekhnicheskikh nauk; BEREZINA, N.I., inzhener; BIRGER, I.A., doktor tekhnicheskikh nauk; BOGUSLAVSKIY, Yu.M., kandidat tekhnicheskikh nauk; BOROVICH, L.S., kandidat tekhnicheskikh nauk; GONIKBERG, Yu.M., inzhener; GORDON, V.O., professor; GORODETSKIY, I. Ye., doktor tekhnicheskikh nauk, professor; GROMAN, M.B., inzhener; DIKER, Ya.I., kandidat tekhnicheskikh nauk; DOSCHATOV, V.V., inzhener; IVANOV, A.G., kandidat tekhnicheskikh nauk; KINASOSHVILI, R.S., doktor tekhnicheskikh nauk, professor; KRUTIKOV, I.P., kandidat tekhnicheskikh nauk; LEVENSON, Ye.M., inzhzner; MAZYRIN, I.V. inzhener; MARTYNOV, A.D., kandidat tekhnicheskikh nauk; NIBERG, N.Ya., kandidat tekhnicheskikh nauk; NIKOLAYEV, G.A., doktor tekhnicheskikh nauk, professor; PETRUSHEVICH, A.I., doktor tekhnicheskikh nauk; POZDNYAKOV, S.N., dotsent; PONOMAREV, S.D., doktor tekhnicheskikh nauk, professor; PRONIN, B.A. kandidat tekhnicheskikh nauk; RESHETOV, D.N., doktor tekhnicheskikh nauk, professor; SATEL', E.A., doktor tekhnicheskikh nauk, professor; SIMAKOV, F.F., kandidat tekhnicheskikh nauk; SLOBODKIN, M.S., inzhener; SPITSYN, N.A., doktor tekhnicheskikh nauk, professor; STOLBIN, G.B., kandidat tekhnicheskikh nauk; TAYTS, B.A., doktor tekhnicheskikh nauk; CHERNYSHEV, H.A., kandidat tekhnicheskikh nauk; SHNEYDEROVICH, R.M., kandidat tekhni-

(Continued on next card)

AL'SHITS, I.Ya., kandidat tekhnicheskikh nauk (and others)..... Card 2.

cheskikh nauk, EYDINOV, V.Ya., kandidat tekhnicheskikh nauk; ERLIKH, L.B., kandidat tekhnicheskikh nauk; ACHERKAN, N.S., doktor tekhnicheskikh nauk, professor, redaktor; MARKUS, M.Ye., inzhener, redaktor; KARGANOV, V.G., inzhener, redaktor; SOKOLOVA, T.F., tekhnicheskiy redaktor.

[Mechanical engineer's manual; in 6 volumes] Spravochnik mashinostroitelia; v shesti tomakh. Izd.2-e, ispr. i dop. Moskva, Gos. nauchno-tekhn.izd-vo mashinostroit. lit-ry, Vol.4, 1955. 851 p. (Mechanical engineering) (MLRA 8:12)

SERENSEN, S. V., SHNEYDEROVICH, R. M. and SVINOGRODSKIY, N. V.

"On the Analysis of Deformed Conditions of Plastic Compounds on the Basis of the Method of Changeable Elasticity Parameters."

report submitted Third Intl. Congress of Rheology, Bad Oeyngausen, GFR, 23-30 Sep 58.

Shneyderovich R.M.

24-58-3-21/38

AUTHOR: Shneyderovich, R. M. (Moscow)

TITLE: Elasto-Plastic Bending of Bars and Systems of Bars (Uprugo-plasticheskiy izgib sterzhney i sterzhnevykh sistem)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Otdeleniye Tekhnicheskikh Nauk, 1958, Nr 3, pp 130-134 (USSR)

ABSTRACT: The relations between the stress and deformation components can be stated in relative co-ordinates referred to the yield point values. With this notation, the relations of the elastic region can be used in the plastic region, accepting variable elastic properties. This method, introduced by Birger, I.A. ("Certain General Methods for the Solution of Problems in the Theory of Plasticity", Prikl.Mat. i Mekh.,1951, Issue 6), reduces elasto-plastic problems to those of pure elasticity if the variable factors are known. These factors can be presented in families of curves, such as Fig.1 for the bending of round bars. The stress distribution over the cross-section is considered and formulae are given replacing the Mohr-Maxwell displacement formulae in energy theorems for the case of elasto-plastic deformation. These formulae are used for statically indeterminate systems of which an example is treated, namely a chain link with a central bridge. There are 6 figures, including 5 graphs, and 6 Soviet refer-

Card 1/2

24-58-3-21/38

Elasto-Plastic Bending of Bars and Systems of Bars.

ences.

SUBMITTED: November 14, 1957.

Card 2/2 1. Bars--Deformation 2. [illegible] 3. Bars--Elasticity
4. Bars--Mathematical [illegible]

25 (1) SOV/145-58-7/8-9/24

AUTHORS: Shneiderovich, R.M., Candidate of Technical Sciences, and Groman, M.B.

TITLE: Displacement Criterion in Connection with Bearing Capacity of Shafts

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy - Mashinostroyeniye, 1958, Nr 7-8, pp 77-87 (USSR)

ABSTRACT: The article is devoted to establishing the critical loads acting on a shaft in connection with the maximum permissible displacement of components linked to it. The shaft critical displacement should be determined on the basis of a normal performance of the mechanism both for the case when the load is continuous and when it is of a short duration. In Fig 1, the authors analyze the effect of shaft deflection under the gear wheel. The value of permissible residual deflection is expressed by formula $f = \Delta_m h - 0.5E_o$, where E_o is initial eccentricity $\Delta_m h$ - minimum per-

Card 1/3

Displacement Criterion in Connection with Bearing Capacity of Shafts

missible displacement of the initial contour. The next problem analyzed in the article is that of inclination of the shaft section under the gear wheel. This question was considered in the work by A.I. Petrusevich, "Toothed Gears", Machine Elements published by the Mashgiz, Volume 2, 1953, edited by N.S. Acherkan [1]. Permissible value of inclination angle θ_1 of one gear with respect to the inclination angle θ_2 of the other gear is determined by the function $\theta_1 = \left(K_0 + 0.1\left(\frac{b}{d_1}\right)^2\right)\frac{P}{Cb_2} - \theta_2$;

where K_0 is a coefficient determined by graphs given in Fig 2; C = 54000 kg/cm^2 for straight teeth; 67500 kg/cm^2 for bevel gears; P is normal force acting on the gear tooth; d_1 - diameter of the smaller gear forming the pair. The authors proceed by analyzing the effect of shaft inclination when supported by roller bearings (Figs 3 and 4), and refer to the work by R.D. Beyzel'man and B.V. Tsypkin, "Rolling Bearings", Mashgiz, 1953

Card 2/3

Displacement Criterion in Connection with Bearing Capacity of Shafts

[2]. Finally, the authors establish the shaft angle of turn on a ball bearing support, expressing it by formula $\theta = \bar{\theta}\sqrt{\bar{\delta}_0 \sqrt[3]{R^2} + \bar{g} - \bar{t}_0}\,\Delta t$; the values of $\bar{\theta}$, $\bar{\delta}_0$, $\bar{g}$ and $\bar{t}_0$ are given in Table 2 and depend on the ball bearing size. There are 3 graphs, 3 tables, 4 figures and 3 Soviet references.

ASSOCIATION: Moskovskiy aviatekhnologicheskiy institut IMASh AN SSSR (Moscow Avio-Technological Institute IMASh AS USSR)

SUBMITTED: March 14, 1958

SHNEYDEROVICH, R.M., kand. tekhn. nauk; GROMAN, M.B.

Static supporting capacity of shafts. Izv. vys. ucheb. zav.; mashinostr. no.9:71-89 '58. (MIRA 12:10)

1.Institut mashinovedeniya AN SSSR.
(Shafting)

Shneyderovich, R.M.

25(2);14(10) P2 PHASE I BOOK EXPLOITATION SOV/2739

Akademiya nauk SSSR. Institut mashinostroyeniya

Problemy prochnosti v mashinostroyenii, vyp. 3 (Strength Problems in Mechanical Engineering, No. 3) Moscow, Izd-vo AN SSSR, 1959. 94 p. Errata slip inserted. 3,000 copies printed.

Ed.: S.V. Serensen, Academician, Ukrainian SSR Academy of Sciences; Ed. of Publishing House: G.A. Nechayev; Tech. Ed.: N.F. Yegorova.

PURPOSE: This book is intended for design engineers and research workers in the fields of machine building and strength of structures. It may also be useful to students of corresponding specialties in advanced technical schools.

COVERAGE: This is a collection of 5 articles dealing with problems of strength and stability of cylindrical parts. Effect of cut-outs, general conditions for the calculation of endurance, regressive analysis of fatigue, and measurements of limits of fluidity in impact loading are considered. References appear at the end of each article.

Card 1/3

TABLE OF CONTENTS:

The author determines the limits of endurance, derives equations of endurance curves, establishes the coefficient of asymmetry of the disintegrating cycle, and determines stresses in metal structures.

AVAILABLE: Library of Congress

12-30-59
IS/ec

SHNEYDEROVICH, R.M.

PHASE I BOOK EXPLOITATION SOV/3728

Serensen, Sergey Vladimirovich, Roman Mironovich Shneyderovich, and Mikhail Borisovich Groman

Valy i osi; raschet i konstruirovaniye (Shafts and Axles; Calculation and Design) Moscow, Mashgiz, 1959. 253 p. Errata slip inserted. No. of copies printed not given.

Reviewer: D. M. Reshetov, Doctor of Technical Sciences, Professor; Ed.: I. I. Trapezin, Candidate of Technical Sciences, Docent; Ed. of Publishing House: L. N. Danilov; Tech. Ed.: B. I. Model'; Managing Ed. for Literature on General Technical and Transport Machine Building (Mashgiz): A. P. Kozlov, Engineer.

PURPOSE: This book is intended for designers.

COVERAGE: The book considers modern methods for calculating strength and rigidity of shafts and axles and the bases of practical design of shafts for modern machinery. Loads carried by different types of shafts (in machine tools, power generators, farm machinery, etc.) and the relationship between actual and theoretical loads are discussed.

Card 1/6

Calculation methods for shafts, for the selection of safe cross sections, and for determining the magnitude of stresses are described. Practical design of shafts, methods of strengthening shafts, and other problems are explained. The first section of the book deals with the most frequently occurring cases in the design and checking of shafts. Calculations connected with estimating the resistance of shafts to static and alternating stresses are discussed together with the characteristics of acting loads and modern concepts of safety factors. The second section of the book represents more specialized problems based on calculations of shafts according to allowable elastic and elastoplastic displacements. Problems in the calculation of statically indeterminate straight shafts and crankshafts are also discussed. The third section of the book is concerned with calculation examples for shafts and axles of production and power machinery. Emphasis is given to actual stress conditions and proper consideration in calculations of the mechanical properties of materials used. In the fourth section reference data for the calculation of shafts for static and fatigue strength are presented. According to the authors these data represent a generalization of corresponding data from other technical literature. No personalities are mentioned. There are 45 references: 44 Soviet and 1 German.

PHASE I BOOK EXPLOITATION SOV/3416

Akademiya nauk SSSR. Institut mashinovedeniya

Voprosy prochnosti materialov i konstruktsiy (Problems of Strength of Materials and Structures) Moscow, 1959. 399 p. Errata slip inserted. 3,200 copies printed.

Resp. Ed.: D. N. Reshetov, Professor, Doctor of Technical Sciences; Ed. of Publishing House: G. L. Gorshkov; Tech. Ed.: S. T. Shikin.

PURPOSE: This book is intended for engineers and scientists concerned with the problems of the strength of materials and construction

COVERAGE: The book contains 28 articles on the strength of materials in general and of machine construction in particular. This collection was prepared under the direction of the Institute of Mechanical Engineering of the AS USSR in honor of Sergey Vladimirovich Serensen, one of the founders and directors of the national school of strength of materials, who recently completed 30 years of scientific activity. The preface gives a short sketch of his life and professional activities. The collection is divided into two parts. The first part contains 13 articles on general problems of strength and the strength of machine construction materials. The second part contains 15 articles on dynamics and calculation of strength and rigidity. There are references at the end of each article.

PART II. DYNAMICS AND CALCULATION OF STRENGTH AND RIGIDITY

AVAILABLE: Library of Congress

Card 6/6

AC/ec
6-27-60

25(2) PHASE I BOOK EXPLOITATION SOV/3096

Birger, I.A., B.F. Shorr, and R.M. Shneyderovich

Raschet na prochnost' detaley mashin; spravochnoye posobiye dlya konstruktorov (Design of Machine Parts for Strength; Manual for Designers) Moscow, Mashgiz, 1959. 459 p. Errata slip inserted. 25,000 copies printed.

General Ed.: I.A. Birger, Doctor of Technical Sciences, Professor; Reviewer: N.P. Dorogov, Engineer; Ed.: N.V. Manakin, Engineer; Managing Ed. for Reference Literature: I.M. Monastyrskiy, Engineer; Tech. Ed.: A.F. Uvarova.

PURPOSE: This manual is intended for engineers and designers.

COVERAGE: The book deals with practical methods of designing parts and units of machines for strength and vibration resistance. Special attention is given to threaded joints, tooth gearing, parts of turbines, and piston engines. Formulas for determining stresses in struts, thin plates, and shelves are presented. No personalities are mentioned.

Card ~~1/14~~

SHNEYDEROVICH, R. M.

Static bearing capacity of parts having the shape of cylindrical shells. Probl. proch. v mashinostr. no.3:3-25 '59. (MIRA 12:11)

(Elastic plates and shells)

SHNEYDEROVICH, R.M.

Elastic plastic deformations of beam and frame structures. Probl. proch.v mashinost. no.4:5 '59. (MIRA 13:5)
(Girders) (Structural frames)

SHNEYDEROVICH, R.M., kand. tekhn. nauk.

Static supporting capacity of parts subjected to elastic-plastic deformations. Vest. mash. 39 no.1:14-24 Ja '59. (MIRA 12:1)
(Deformations (Mechanics))

SHNEYDEROVICH, R. M. & SORENSEN, S. V. (Mechan Res Institute of Acad. of Sciences, Moscow)

"On the Plasticity Function Under Cyclic Deformation."

report submitted for the Xth International Congress of Applied Mechanics, Stresa, Italy, 31 Aug - 7 Sep 60.

GUSENKOV, A.P. (Moskva); PARSHINTSEVA, T.S. (Moskva); SHNEYDEROVICH, R.M. (Moskva)

Some characteristics of repeated-strain curves in case of a symmetrical stress cycle. Izv.AN SSSR. Otd.tekh.nauk.Mekh.i mashinostr. no.5:108-112 S-O '60. (MIRA 13:9)
(Strains and stresses)

GUSENKOV, A.P. (Moskva); SHNEYDEROVICH, R.M. (Moskva)

Characteristics of cyclic deformation curves in the reanges of supple and stiff loads. Izv.AN SSSR.Otd.tekh.nauk.Mekh.i mashinostr. no.2: 150-152 Mr-Ap '61. (MIRA 14:4)
(Deformations (Mechanics))

29072
S/179/61/000/004/016/019
E081/E335

11-2313

AUTHORS: Serensen, S.V. and Shneyderovich, R.M. (Moscow)

TITLE: Investigation of the stress state and strength in elastoplastic cyclical deformation

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye tekhnicheskikh nauk. Mekhanika i mashinostroyeniye. no. 4, 1961, pp. 136 - 140

TEXT: According to previous work (Gusenkov, A.P. and Shneyderovich, R.M. - this journal, no. 2, 1961), the stress-strain diagram for elastoplastic cyclic deformation in the k-th half-cycle can be written as:

$$\varepsilon^{(k)} = \frac{A}{k^{\alpha}} \left[f\left(\frac{s}{2}\right) - 1 \right] + s \qquad (1)$$

where the stress s and the strain ε are expressed in terms of the stress σ_m and the strain e_t at the yield value, A and α are parameters of cyclic deformation,

Card 1/2

Investigation of ....

f(s/2) is the stress-strain diagram for a single deformation. After transforming the equation to allow for linear hardening, it is applied to finding the relation between the twisting couple and angle of twist for A = 1.5, α = 0.5 and k = 1, 2, 5, 10, 100 half-cycles. An approximate solution to this problem is also derived and is compared with the exact solution. Further development of the analysis enables the stress-distribution in a perforated strip to be calculated and the bearing of the results on the problem of fatigue failure is briefly discussed.
There are 6 figures and 2 Soviet-bloc references.

SUBMITTED: March 17, 1961

Card 2/2

S/032/61/027/009/005/019
B117/B101

AUTHORS: Gusenkov, A. P., and Shneyderovich, R. M.

TITLE: Deformation strength under cyclic load with low load cycle

PERIODICAL: Zavodskaya laboratoriya, v. 27, no. 9, 1961, 1123-1129

TEXT: A number of building materials (АК8 (AK8), В96 (V96), В95 (V95), Д-16 (D-16), steels of the brands 30ХГС (30KhGS), 45, chrome vanadium steel) were exposed to cyclic elastic-plastic deformation during torsion. This type of test made it possible to exclude the dependence of deformation curves on the initial load. Form and dimensions of a tubular specimen with 1 mm wall thickness permit, in the cross section ($t/d = 0.05$), attainment of a state of stress coming close to a steady state. Moreover, the stability is maintained at an initial load of the materials tested up to high degrees of deformation ($e_0 < 10$). The specimens were loaded on a special machine of the К-3 (K-3) type. It is driven by an electric motor, over a reducer, at a constant speed of 0.5 rpm. For deformations of $1 < e_0 < 10$, this safeguards a load frequency of up to 10 load cycles per minute. Force and deformation were measured by resistance strain gauges. The force strain gauges were to

Card 1/4

the dynamometer so that only the torque is determined. The deformations are measured on the basis of 10 mm by means of a special device. The deformation curves are recorded by an automatic recorder described in: Metody opredeleniya napryazheniy i deformatsiy v mashinakh (Methods of Determination of Stresses and Deformations in Machines), Mashgiz (1960)). With this device it is possible to obtain curves for load cycles with limited stress, or deformation of any degree of asymmetry. The curves for cyclic deformation were investigated for initial deformation values of $1 < e_c < 10$. The plastic components of these curves were found to be determined by two independent functions $\varepsilon_p = F_1(S) \cdot F_2(k)$ (6). For a given stress, the values of the plastic components can be calculated from the formula $\varepsilon_p = (A/k^{\alpha}) \left[f(S/2) - 1 \right]$ (7). Here, $f(S/2)$ is determined by the curve for initial deformation. The equation for the cyclic deformation curve has the form $\varepsilon = S, \quad (S \leq S_T)$

$$\varepsilon = (A/k^{\alpha}) \left[f(S/2) - 1 \right] - S, \quad (S \geq S_T) \quad (8).$$

Therefrom, cyclic deformation curves may be determined under soft load for any semicycle from the diagram of initial deformation according to known parameters A and α (A

and α are coefficients constant for the respective heat treatment of the material). It may also be applied, with sufficient accuracy, to deformations with maximum distortions (hard load). The cyclic deformation parameters were found to depend on the type of heat treatment of the material. Tests with steel of the 30KhGS brand show that they may change within the ranges $1 < A < 2$ and $-0.5 < \alpha < +0.5$. The results found agree with those obtained by I. M. Roytman and Ya. B. Fridman (Ref. 8: Zavodskaya laboratoriya, XIII, 4 (1947)) while investigating the change in width of hysteresis loops during cyclic deformation. On the basis of the rules established, the change of the state of stress during cyclic elastic-plastic deformation may be evaluated. V. V. Moskvitin is mentioned: (Uprugo-plasticheskiye deformatsii pri povtornykh nagruzheniyakh (Elastic-plastic Deformations on Repeated Load) Doctor Dissertation, M, MSU (1960)). There are 8 figures, 2 tables, and 10 references: 6 Soviet-bloc and 4 non-Soviet-bloc. The reference to the English-language publication reads as follows: R. L. Wooley, Phil. Magazine, v. 44, ser. 7, no. 353 (1953).

Deformation strength under cyclic ...

S/032/61/027/009/005/019
B117/B101

ASSOCIATION: Institut mashinovedeniya Akademii nauk SSSR (Institute of the Science of Machines of the Academy of Sciences USSR) ✓

Card 4/4

SHNEYDEROVICH, R.M., kand.tekhn.nauk; Prinimali uchastiye: KALUGINA, O.N., mladshiy nauchnyy sotrudnik; GUSENKOV, A.P., mladshiy nauchnyy sotrudnik

Carrying capacity of parts under repeated static loading. Vest. mash. 42 no.1:17-25 Ja '62. (MIRA 15:1)

1. Institut mashinovedeniya AN SSSR (for Kalugina, Gusenkov).
(Strength of materials)

GUSENKOV, A.P.; SHNEYDEROVICH, R.M.

Method of studying the diagrams of cyclic deforming at constant elevated temperatures. Zav.lab. 29 no.12:1476-1480 '63. (MIRA 17:1)

GUSENKOV, A.P.; SERENSEN, S.V.; SHNEYDEROVICH, R.M. (Moscow):

"Investigation of properties of cyclic deformation diagrams for structural alloys."

report presented at the 2nd All-Union Congress on Theoretical and Applied Mechanics, Moscow, 29 Jan - 5 Feb 64.

SERENSEN, S. V.; SHNEYDEROVICH, R. M.

"The effect of time on stress distribution in the case of cyclic deformation."

report submitted for 11th Intl Cong of Theoretical & Applied Mechanics & General Assembly, Munich, 30 Aug-5 Sep 64.

L 39994-65 EWA(h)/EWP(k)/EWA(c)/EWT(d)/EWT(m)/EWP(b)/T/EWA(d)/EWP(w)/EWP(v)/EWP(t)
Pf-4/Peb EM/JD/HW/GS

ACCESSION NR: AT5007859 S/0000/64/000/000/0194/0210 40 Btl

AUTHOR: Shneyderovich, R. M.

TITLE: Fatigue during elastoplastic deformation

SOURCE: Nauchno-tekhnicheskoye obshchestvo mashinostroitel'noy promyshlennosti. Tsentral'noye pravleniye. Voprosy mekhanicheskoy ustalosti (Problems in mechanical fatigue). Moscow, Izd-vo Mashinostroyeniye, 1964, 194-210

TOPIC TAGS: repeated static load, elastoplastic deformation, fatigue limit, metal fatigue, plastic deformation, fatigue crack, elastic deformation

ABSTRACT: The author examines the problem of destruction from so-called repeated static loads, which, in essence, is destruction from loads large in magnitude but applied over a small (up to 10^3-10^4) number of cycles. This problem was first encountered in the aircraft industry during repeated overloading of maneuvering aircraft and during gusts of wind, but it also applies to ship building since cracks leading to brittle fracture occur by wave action. The action of repeated static loads is called fatigue with a small number of cycles (short-cycle) or static endurance, and many of its features are associated with elastoplastic de-

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L 39994-65

ACCESSION NR: AT5007859

formation during repeated static loading. The process of destruction with an increase in the number of cycles is presented as a result of the interaction of two processes: a change in the breaking strength relative to the number of cycles of load application and a change in the stressed state during cyclic loading. The dependence of rupture stresses on the number of loading cycles to fracture was examined for a uniform stressed state with a symmetric cycle. The tests were carried out on various steels and alloys at a loading frequency of 5-20 cycles per minute. It was found that fracture in elastoplastic, cyclic deformation substantially depends on the loading frequency. This is determined on the one hand by the effect of the frequency on the ability of the material to resist rupture and, on the other hand, by the effect on the elastoplastic properties. The author states that on the basis of the evidence gathered, special investigations are needed which will more fully reflect the nature of the development of elastoplastic deformations. Orig. art. has: 1 table, 18 figures, and 10 formulas.

ASSOCIATION: None

SUBMITTED: 020ct64 ENCL: 00 SUB CODE: MM, AS

NO REF SOV: 009 OTHER: 010

Card 2/2 nh

BEKSH, T.A.; SHNEYDEROVICH, R.M.

Methods of estimating strength in a small number of loading cycles; survey. Zav.lab. 30 no.12:1491-1496 '64.

(MIRA 18:1)

L 55972-65 EWT(d)/EWT(m)/EWP(w)/EWA(d)/EPR/T/EWP(t)/EWP(k)/EWP(z)/EWP(b)/EWA(c)
Pf-4/Ps-4 IJP(c) MJW/JD/HW/EM

ACCESSION NR: AP5014495 UR/0032/65/031/006/0720/0725
620.171

42
39
B

AUTHORS: Gusenkov, A. P.; Larionov, V. V.; Shneyderovich, R. M.

TITLE: Peculiarities of tension-compression failure after a small number of cycles

SOURCE: Zavodskaya laboratoriya, v. 31, no. 6, 1965, 720-725

TOPIC TAGS: low cycle fatigue, fatigue, fatigue failure / V 96 aluminum alloy, 1Kh18N9T steel, 45 steel

ABSTRACT: To continue the low cycle failure investigations described by T. A. Beksh and R. M. Shneyderovich (Zavodskaya laboratoriya, XXX, 12, 1964), specimens of aluminum alloy V-96 (work hardening), steel 1Kh18N9T (work hardening and then constant load-deformation loop), steel 45 (constant loop width), and heat resistant steel (cyclic weakening) were experimentally fatigued in tension-compression at a rate of ~ 10 cpm. The specimens (test section 22 mm long and 8 mm in diameter) were loaded with symmetrical and asymmetrical loads ($r = \tau_{min} / \tau_{max}$ between 1 and 0.3), and the load deformation, plastic deformation and area

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reduction were recorded. The stress-cycle and elongation and area reduction-cycle curves were obtained to determine the relative importance of "quasi-static" failure (marked by plastic deformation) and fatigue failure (marked by growth of fatigue cracks). The plastic deformation

$$\varepsilon_{tot}^{(k)} = e^{(0)} - \sigma^{(0)} + \sum_{k=1}^{k} \delta^{(k)} \cdot (-1)^k,$$

(where $\delta(k)$ = plastic deformation during a half-cycle, 0 = initial loading) accumulated after k half-cycles was also evaluated and plotted as a function of cycles. It was found that for 1Kh18N9T (austenitic) quasi-static failure was primarily determined by the stress maxima, while fatigue failure was determined by stress amplitude. The curves for this steel represented the most general case exhibiting regions of quasi-static and fatigue failure as well as a large region of intermediate failure modes. For steel 45 the failures were quasi-static, independent of the initial stress and stress asymmetry, and occurred at a deformation close to the deformation of a single cycle failure. Alloy V-96 failed in fatigue at ψ of 2-3%, while static failure was accompanied by an area reduction of 15%. Typically, the alloy had a life of less than 100 cycles (quasi-static) and would not exhibit fatigue failure below 100 cycles. Figure 1 on the Enclosure shows a comparison between the fatigue properties of steel 45, 1Kh18N9T,

L 55972-65
ACCESSION NR: AP5014495

and heat resistant steel. Orig. art. has: 7 figures and 1 formula.

ASSOCIATION: Gosudarstvennyy nauchno-issledovatel'skiy institut mashinovedeniya (State Scientific Research Institute of Machine Design)

SUBMITTED: 00 ENCL: 01 SUB CODE: MM, AS

NO REF SOV: 008 OTHER: 001

Card 3/4

L 3297-66 EWT(d)/EWT(m)/EWP(w)/EWA(d)/T/EWP(t)/EWP(k)/EWP(z)/EWP(b)/EWA(c)
MJW/JD/HW/EM
ACCESSION NR: AP5012073 UR/0380/65/000/001/0086/0090
620.162.2:536.4

AUTHOR: Gusenkov, A. P. (Moscow); Shneyderovich, R. M. (Moscow)

TITLE: Characteristics of cyclic elastoplastic deformation at high temperatures

SOURCE: Mashinovedeniye, no. 1, 1965, 86-90

TOPIC TAGS: elastic deformation, plastic deformation, cyclic test, elastic hysteresis, heat resistant steel, austenitic steel, stainless steel/ 1Kh18N9T stainless steel

ABSTRACT: Samples of 1Kh18N9T austenitic stainless steel and heat resistant steel are studied for cyclic shearing (twisting of thin-walled specimens) with a symmetric loading cycle. It was found that 1Kh18N9T steel is hardened while heat resistant steel is softened by cyclic deformation. Variation in the width of the plastic hysteresis loop as a function of the number of loading cycles may be expressed as a power law in the case of 1Kh18N9T steel and as an exponential function in the case of heat resistant steel. The constant which characterizes deformation in the first loading cycle is practically independent of temperature. The parameters which

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L 3297-66

ACCESSION NR: AP5012073

reflect a change in the plastic deformation of the material as the number of loading cycles is increased are practically constant in the 350-400° range. These parameters show an increase above these temperatures. This increase is much more pronounced in heat resistant steel than in 1Kh18N9T steel. It is pointed out that these temperature effects apply to the relative properties of the metals studied, and that the deformation patterns for absolute stress values may be considerably dependent on temperature levels. "The authors are grateful to O. N. Kalugina for her help in conducting the experiments and analyzing the results." Orig. art. has: 5 figures, 1 table.

ASSOCIATION: none

SUBMITTED: 30Nov64 ENCL: 00 SUB CODE: MM, AS

NO REF SOV: 004 OTHER: 002

SHNEYDEROVICH, R.M. (Moskva); SHNEYDEROVICH, R.M. (Moskva)

Criterion of the carrying capacity of parts at a low number of loading cycles. Mashinovedenie no.2:70-78 '65.

(MIRA 18:8)

L 13063-66 EWT(m)/EWP(w)/T/EWP(t)/EWP(b) JD

ACC NR: AP6000185 SOURCE CODE: UR/0032/65/031/012/1494/1497

AUTHOR: Gusenkov, A. P.: Larionov, V. V.; Shneyderovich, R. M. 21

ORG: State Scientific Research Institute for Machine Design (Gosudarstvennyy nauchno-issledovatel'skiy institut mashinovedeniya) B

TITLE: Comparison of short-time fatigue curves [obtained] in testing under soft and hard loading [conditions] 14

SOURCE: Zavodskaya laboratoriya, v. 31, no. 12, 1965, 1494-1497

TOPIC TAGS: fatigue test, fatigue curve, fatigue curve equation

ABSTRACT: Fatigue testing performed with a small number of cycles is conducted mainly under soft or hard loading conditions (that is, with constant stress or strain amplitudes, respectively) and a fatigue curve for the applied type of loading conditions is obtained. The procedure in constructing a fatigue curve for hard loading from a known fatigue curve for soft loading, and vice versa, is discussed. Equations of the fatigue curves are written for both testing techniques, taking into account the variation in stress-strain relations during the process of cyclic deformation. The conditions and results of testing an aluminum alloy, austenitic steel, and heat-resistant steel (the first two materials are strainhardened, the third is softened by cyclic deformation) are presented and discussed. The fatigue curves for both types of loading conditions obtained by analytical calculations, by the proposed method, and by testing are compared with each other in diagrams and are examined. Orig. art. has: 5 figures and 2 formulas. [VK]

Card 1/2 UDC: 620.178.3

2

L 13063-66

ACC NR: AP6000185

SUB CODE: 11,20/ SUBM DATE: none/ ORIG REF: 004. OTH REF: 002/ ATD PRESS: 4181

Card 2/2 HW

NADELYAYEVA, V.M.; SHNEYDMAN, A.A.

Roentgenotherapy in glaucoma. Vest.rent.i rad. no.6:33-38 N-D '53.
(MLRA 7:1)

1. Iz kliniki glaznykh bolezney Irkutskogo meditsinskogo instituta (ispolnyayushchiy obyazannost' direktora - dotsent N.V.Kositsyn)
(X rays--Therapeutic use) (Glaucoma)

SHNEYDMAN, A.A.

Problems of so-called latent period following x-ray irradiation; preliminary report. Vest.rent. i rad. no.2:24-26 Mr-Ap '55. (MLRA 8:5)

1. Iz rentgenoterapevticheskogo kabineta (zav. A.A.Shneydman) Irkutskogo oblastnogo onkologicheskogo dispansera.

(ROENTGEN RAYS, effects, post-irradiation latent period)

NADELYAYEVA, V.M.; SHNEYDMAN, A.A.

X-ray therapy of glaucoma [with summary in English]. Vest.rent. i rad. 32 no.4:28-31 Jl-Ag '57. (MIRA 10:11)

1. Iz kliniki glaznykh bolezney (zav. kafedroy - dotsent N.V. Kositsyn) Irkutskogo meditsinskogo instituta (dir. - dotsent K.K. Alkalayev)

(GLAUCOMA, ther.
x-ray)
(ROENTGEN RAYS, ther. use
glaucoma)

SHNEYDMAN, A.A.

Oblique roentgenotherapy in persistent hiccup of reflex origin.
Vest.rent. i rad. 32 no.6:79-81 N-D '57. (MIRA 11:3)

1. Iz kafedry fakul'tetskoy khirurgii (zav.-prof. B.D.Dobychin)
Irkutskogo meditsinskogo instituta.
(HICCUP
oblique
roentgenother. in persistent hiccup of reflex origin (Rus)
(RADIOTHERAPY, in various dis.
persistent hiccup of reflex origin (Rus)

SERKINA, A.V.; SHNEYDMAN, A.A.

Method for the treatment of pararectal fistulae. Vest.rent.i rad. 35 no.1:43-45 Ja-F '60. (MIRA 13:6)

1. Iz fakul'tetskoy khirurgicheskoy kliniki (rukovoditel' - prof. B.D. Dobychin) Irkutskogo meditsinskogo instituta. Adres avtora: Irkutsk, Vuzovskaya naverezhnaya, d.4, kv.9.
(RECTAL FISTULA ther.)

SHNEYDMAN, A.

X-ray therapy in pyogenic granuloma (botryomycosis). Vest.derm. i ven. 35 no.3:71-72 Mr '61. (MIRA 14:4)

1. Iz kafedry kozhnykh i venericheskikh zabolevaniy (zav. - prof. M.S. Kaplun) Irkutskogo meditsinskogo instituta.
(MYCOSES) (MEDICAL MYCOLOGY) (X RAYS—THERAPEUTIC USE)

SHNEYDMAN, A.I. [Schneidman, A.I.]

Seminar on cookery for the sick. Med. sestra 20 no.10:60-61 O '61.
(MIRA 14:12)

1. Iz Oblastnoy klinicheskoy bol'nitsy No.1, Sverdlovsk.
(COOKERY FOR THE SICK)

SHEYDMAN, A. Ye.

"On the Effect of Centrifugal Forces on the Frequency in the Free Vibrations of Rotating Steam-Turbine Vanes." Cand Tech Sci, All Union Heat Engineering Inst imeni F. E. Dzerzhinskiy, Min Electric Stations USSR, Moscow, 1955. (KL, No 9, Feb 55)

SO: Sum. No. 631, 26 Aug 55-Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (14)

SOV/96-59-3-5/21

AUTHORS: Sobolev, S.P., Engineer: Shneydman, A.Ye., Candidate of Technical Sciences: Zel'des, N.Ya., Engineer: Sukhinin, V.P., Engineer and Shor, L.A., Engineer

TITLE: Experience in Developing the Blading for the Last Stage of a 150-MW Turbine (Opyt sozdaniya lopatki posledney stupeni dlya turbiny moshchnost'yu 150 Mvt)

PERIODICAL: Teploenergetika, 1959, Nr 3, pp 26-29 (USSR)

ABSTRACT: For a long time the Khar'kov Turbine works has been developing last-stage blading for large turbines, leading, in 1956-7, to a rational series of designs. All the blades in the series are designed on common principles and are standardised as much as possible. Blades with an active length of 740 mm were installed in a 100-MW turbine that commenced operation in 1957. Blading for the last stage of the PVK-150, 150-MW turbine, illustrated in Fig.1, is designed for a speed of 3,000 rpm and has an active length of 780 mm. It is based on profile T3 recommended by the Central Boiler-Turbine Institute. The stationary nozzle vanes were of sheet steel. The main aerodynamic characteristics of the blade are tabulated. Successive

Card 1/3

Experience in Developing the Blading for the Last Stage of a 150-MW Turbine

stages in profiling of the blade are described. The blading was made of stainless chrome steel 1Kh13 and the stress levels conformed to its properties. The stress distribution over the length of the blade is plotted in Fig.2 and does not exceed 2,630 kg/cm^2. By means of resistance strain gauges, vibration studies were made on a special experimental wheel in a vacuum chamber. A considerable number of resonant frequencies in the blading were disclosed. The blading was then de-tuned to 300 c/s, leaving four types of oscillation which are described. Various constructions were studied in order to reduce these vibrations and finally two conventional hoops of stiffening "wire" were threaded through the blading in the usual manner. Actually the "wire" consisted of tubing with an external diameter of 15 mm and a wall thickness of 2 mm. Because of the high centrifugal forces side-entry blade attachment was adopted, using serrated roots of diminishing cross-section, with six steps in the "fir tree", as drawn in Fig.3. The method of assembling the blading in the wheel is described and

Experience in Developing the Blading for the Last Stage of a 150-MW Turbine

illustrated photographically in Fig.4. The blades are made from forgings each weighing 35 kg. The method of manufacture is described and, despite the large size, no special difficulties arose. It is considered that it will be possible to make still larger blades. There are 4 figures and 1 table.

ASSOCIATION: Khar'kovskiy turbinnyy zavod (Khar'kov Turbine Works)

40617
S/114/62/000/009/001/003
E200/E484

26.2120

AUTHORS: Trzhetsinskiy, A.V., Engineer,
Shneydman, A.Ye., Candidate of Technical Sciences

TITLE: Determination of the frequencies of bending vibrations of blades and the critical speeds of multi-supported rotors

PERIODICAL: Energomashinostroyeniye, no.9, 1962, 8-16

TEXT: There is a need for adaptation to computers of methods of calculating the free oscillation of twisted blades of the later stages of large steam and gas turbines and the critical frequencies of coupled rotor shafts. The authors develop a mathematical solution for determining natural frequencies of bending oscillations of straight twisted rods and applies it to blades and flexibly coupled rotors. The bending moments about some fixed (x,y,z) axes are

$$\left.\begin{aligned} M_x &= D' \sin 2\varphi \frac{d^2x}{dz^2} - (S' + D' \cos 2\varphi) \frac{d^2y}{dz^2}; \\ M_y &= -D' \sin 2\varphi \frac{d^2y}{dz^2} + (S' - D' \cos 2\varphi) \frac{d^2x}{dz^2}; \end{aligned}\right\} \quad (1)$$

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where $S' = E\frac{J_\xi + J_\eta}{2}$, $D' = E\frac{J_\xi - J_\eta}{2}$

J_ξ and J_η - moments of inertia about the main ξ and η axes measured along the rod, φ - angle between those axes and x and y axes. Transforming moments of inertia to x and y and assuming that

$$x(z,t) = x(z) \sin pt \quad \text{and} \quad y(z,t) = y(z) \sin pt$$

we see that

$$\left.\begin{aligned} \frac{d^2}{dz^2}\left(EJ_y\frac{d^2x}{dz^2} + EJ_{xy}\frac{d^2y}{dz^2}\right) &= mp^2x; \\ \frac{d^2}{dz^2}\left(EJ_x\frac{d^2y}{dz^2} + EJ_{xy}\frac{d^2x}{dz^2}\right) &= mp^2y, \end{aligned}\right\} \qquad (3)$$

where p - angular frequency of oscillations, m - mass per unit length. To facilitate solution, it is assumed that the rod is made up of a number of points of concentrated mass connected by weightless elastic rods. Other bending equations are

Determination of the frequencies ...

$$\left.\begin{aligned}\frac{d^2x}{dz^2} &= \frac{1}{E\left(J_xJ_y - J_{xy}^2\right)}\left(J_xM_y + J_{xy}M_x\right);\\ \frac{d^2y}{dz^2} &= -\frac{1}{E\left(J_xJ_y - J_{xy}^2\right)}\left(J_yM_x + J_{xy}M_y\right).\end{aligned}\right\} \quad (7)$$

substituting

$$\left.\begin{aligned}M_y &= M_{y0} + \frac{M_{y1} - M_{y0}}{\Delta z_1}z;\\ M_x &= M_{x0} + \frac{M_{x1} - M_{x0}}{\Delta z_1}z.\end{aligned}\right\} \quad (8)$$

From the above bending equations, by integrating twice, we get expressions for twist and deflection at a point along the rod, from which forces at this point can be found. This process is repeated for subsequent points. The forces and deflections at any point can be obtained from the following equations

Card 3/4

$$\left.\begin{aligned} Q_{xn} &= a_{11}Q_{x0} + a_{12}Q_{y0} + a_{13}M_{x0} + \cdots + a_{18}y_0; \\ Q_{yn} &= a_{21}Q_{x0} + a_{22}Q_{y0} + a_{23}M_{x0} + \cdots + a_{28}y_0; \\ &\cdots\cdots\cdots\cdots\cdots\cdots\cdots \\ y_n &= a_{81}Q_{x0} + a_{82}Q_{y0} + a_{83}M_{x0} + \cdots + a_{88}y_0. \end{aligned}\right\} \quad (23)$$

where a_{ik} - numerical coefficients which can be determined from tables which are included in the article. If a rod has more than two supports then it is necessary to know the boundary conditions at the ends of every span. Knowledge of forces at the ends enables us to find p by successive approximations. Since there may be more than one value of p it is advisable to plot a graph of p against a known boundary force. Two worked numerical examples are given: a blade subjected to twisting moments and a compound rotor. Calculations of critical speeds of rotors can be made very quickly on a Strela-3 or Ural-1 computer. There are 4 figures and 6 tables.

Card 4/4

SHNEYDMAN, A. Ye.

4

PHASE I BOOK EXPLOITATION SOV/6341

Shubenko-Shubin, Leonid Aleksandrovich, Corresponding Member, Academy of Sciences USSR, David Mikhaylovich Gerner, Natan Yakovlevich Zel'des, Vilor L'vovich Ingul'tsov, Vladimir Zel'manovich Kogan, Moisey Yosifovich Pokrassa, Sergey Petrovich Sobolev, Viktro Pavlovich Sukhinin, Anatoliy Vitol'dovich Trzhetsinskiy, Avadiy Yefimovich Shneydman

Prochnost' elementov parovykh turbin (Strength of Steam Engine Parts). Moscow, Mashgiz, 1962. 567 p. Errata slip inserted. 4000 copies printed.

Reviewer: B. M. Panshin; Ed.: R. A. Nikiforova, Engineer; Tech. Ed.: M. S. Gornostaypol'skaya; Chief Ed.: Mashgiz (Southern Dept.): V. K. Serdyuk, Engineer.

PURPOSE: This book is intended for steam-turbine designers and service and engineering personnel in the steam-turbine industry. It may also be useful as a special textbook for teachers and students specializing in the steam- and gas-turbine industry.

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Strength of Steam Engine Parts SOV/6341

COVERAGE: This book contains material on the structural strength problems of all basic steam-turbine parts. Industrial methods of calculating turbine blades, disks, rotors, diaphragms, housings, etc., some described for the first time, are given. Metal strength and methods for its control are described in detail.

TABLE OF CONTENTS [Abridged]:

Card 2/5

ACCESSION NR: AP4023731 S/0114/64/000/003/0008/0012

AUTHOR: Shneydman, A. Ye. (Candidate of technical sciences); Trzhetsinskiy, A. V. (Engineer); Lupilov, L. I. (Engineer)

TITLE: Determining the cantilever-vibration frequency of rotating twisted blades

SOURCE: Energomashinostroyeniye, no. 3, 1964, 8-12

TOPIC TAGS: turbine, turbine blade, twisted blade, twisted blade vibration, cantilever vibration, twisted blade vibration frequency, blade cantilever vibration

ABSTRACT: The frequency of free vibration of stationary twisted blades was found earlier by the residue method by these authors (Energomashinostroyeniye, no. 9, 1962). In the present article, the method is extended over the case of rotating blades. By regarding the blade as an elastic weightless bar carrying a series of point masses and by considering the vibration component forces, design formulas have been developed and design coefficients estimated (given in two

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ACCESSION NR: AP4023731

tables). The design procedure lends itself easily to computer programing. An example was calculated on the "Ural-4" computer. The vibration frequencies were estimated as well as experimentally determined for 780-mm and 1,050-mm-long twisted blades, for both stationary and rotating states. The rotation tests "were conducted in a steel vacuum chamber"; the rotor was driven by a variable-speed d-c motor. "Vibrations were set up by a steam jet directed at the blades." The speed was varied within 0-3,300 rpm. Orig. art. has: 4 figures, 11 formulas, and 4 tables.

ASSOCIATION: none

SUBMITTED: 00	DATE ACQ: 15Apr64	ENCL: 00
SUB CODE: PR, AP	NO REF SOV: 001	OTHER: 001

Card 2/2

KRACHKOVSKIY, N. N.; SHNEYDMAN, Ya. S.; LEVIN, F. P.

"Several Questions of the Schemes of Interconnection of High-Voltage Nets," Electricity, Publ. by the Printing House of the Govt. Energy (Electrical) Publ. House, in Moscow, 1952.

SHNEYDMAN, Y. B., LEVIN, F. I., Engs.

Commutation (Electricity)

Remarks on N. N. Krachkovskii's article "Some problems of commutation schemes of high voltage networks." Elektrichestvo, No. 6, 1952.

Monthly List of Russian Accessions, Library of Congress November 1952 UNCLASSIFIED

[illegible], [illegible].

Electrict Wiring

Podless 3-35 KV line lead-in. [illegible]rom energ. 2, No.5, 1952.

Monthly List of Russian Accessions, Library of Congress, August, 1952. UNCLASSIFIED

SHNEYDMYULLER, V. I. (DECEASED) 1963/2

c' 1962

MATHEMATICS

see ilc

SHNEYE, A.Ya.

Role of prolonged local anesthesia in surgery. Trudy 1-go MMI 3:166-174 '57. (MIRA 14:5)
(LOCAL ANESTHESIA)

SHNEYE, A.Ya.; CHAKHUNASHVILI, O.S.; SIMONYAN, K.S., red.; KOKIN, N.M., tekhn. red.; BASHMAKOV, G.M., tekhn. red.

[Prolonged local anesthesia as a therapeutic method] Dlitel'noe mestnoe obezbolivanie kak lechebnyi metod. Moskva, Medgiz, 1963. 85 p. (MIRA 17:1)

S/262/62/000/010/002/024
I007/I207

AUTHOR: Shneye, Ya. N.

TITLE: Present-day trends in the development of gas turbine design

PERIODICAL: Referativnyy zhurnal, otdel'nyy vypusk. 42, Silovyye ustanovki, no. 10, 1962, 31–32, abstract 42.10.160. In collection "Vopr. mashinostr. Tr. Nauchno-tekhn. Konferentsii no razvitiyu proizvodit sil Kharkovsk. econ. adm. r-na", Kiev, no. 3, AS USSR, 1960, 17–26

TEXT: Report on developments in the design of a gas turbines for stationary, mobile and other types of plants. It is shown that maximum installed capacity of gas turbines is found at power plants and mobile units. The series production of gas turbine for locomotives, automobiles and tractors is under way. The power plants and among them the peak stations most frequently have gas turbine units of simple layout; for plants with a capacity of more than 10 Mw, the gas turbine units are equipped with an intermediate cooling, second combustion-stage and heat regeneration. The U.S.A. has the greatest number of installed gas-turbine units which may be explained by its fuel resources (high consumption of gaseous and liquid fuel). In the power range from 1–12 Mw, the efficiency of gas turbine units exceeds that of steam turbines since the latter are less suitable for high steam conditions. Moreover, gas-turbines permit a more compact design than steam turbines. It is shown that in the power range above 100 Mw, combined steam-gas turbine units have good prospects for power plants. The use of nuclear fuel for powering gas turbines is adequate only if the working fluid be preheated to temperatures higher than 500°C to 600°C.
[Abstracter's note: Complete translation.]

Card 1/1

SHNEYER, I.A., inzhener.

Transportation of suspended materials in channels being dammed.
Gidr. i mel. 8 no.12:3-13 D '56. (MLRA 10:1)
(Dams) (Alluvium)

SHNEYER, I.A., Cand Tech Sci -- (diss) "Formation of earth deposits in the river bed streams." Tashkent, Pub House of Acad Sci UzSSR, 1958, 23 pp with drawings (Acad Sci UzSSR. Inst of Water Problems and Hydraulic Engineering) 200 copies (KL, 42-58, 116)

AUTHORS: Itsikson, Ye.M., and Shneyer, I.A., Engineers 117-2-6/29

TITLE: Device for Mechanized Thread Checking (Pribor dlya mekhanizatsii kontrolya rez'by)

PERIODICAL: Mashinostroitel', 1958, # 2, pp 14-15 (USSR)

ABSTRACT: The article gives detailed description, drawing, and operating information on a screw thread check device, designed by Engineer V.V. Matveyev. The device has eliminated the manual screwing of work into calipers and increased by 4 times the work efficiency of inspectors.

When used with a reversible electric motor, the device will check both right ahd left hand threads.

There is 1 drawing.

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SHNEYER, I.A.

AUTHOR: Shneyer, I.A., Engineer 98-58-5-10/33

TITLE: The Density of Alluvial Sand (Plotnost' peskov pri ikh namyve)

PERIODICAL: Gidrotekhnicheskoye Stroitel'stvo, 1958, Nr 5, pp 39-41 (USSR)

ABSTRACT: The density of alluvial sand at the Kakhovskaya (Kakhovka) and Kayrakkumskaya (Kayrakum) dams were examined, and the following conclusions were made: 1) clean alluvial sand deposits in deep water reservoirs have more mellow structure than sand sedimented above the actual water line; 2) the upper water part of the alluvial dam serves as an additional weight that tightens the sand of the under water part, thereby maintaining its stability, and 3) the pressure of the upper water sand does not compress the under water part.
There are 2 diagrams, 2 schematic figures, 1 table, and 4 Soviet references.

AVAILABLE: Library of Congress

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AUTHOR: Shneyer, I.A., Engineer SOV-98-58-9-7/21

TITLE: The Calculation of Fractionation During the Pouring of Sandy Earth (Raschët fraktsionirovaniya peschanogo grunta pri namyve).

PERIODICAL: Gidrotekhnicheskoye stroitel'stvo, 1958, Nr 9, pp 23 - 26 (USSR)

ABSTRACT: The author proposes a method for calculating the fractionation of sandy earth based on the calculation of depositions of alluvion in a turbulent stream with a variable transportation capacity. This method was tested for sandy ground, as could be used in the preparatory planning stages. The calculation is mainly based on formulae devised by A.N. Gostunskiy and M.A. Velikanov. There are 2 graphs, 3 tables, 1 diagram and 1 Soviet reference.

1. Sand--Fractionation 2. Turbulent flow--Measurement
3. Mathematics--Applications

Card 1/1

SHNEYER, I.A.

10(4)

AUTHOR: Hozinoer, S.T., Chairman SOV/98-59-7-21/22

TITLE: Conference on Scientific Research in the Field of Hydromechanics

PERIODICAL: Gidrotekhnicheskoye stroitel'stvo, 1959, Nr 7, pp 62-65 (USSR)

ABSTRACT: The article is a chronicle of the above-named conference, which was held in Moscow from April 15-17, 1959, on the initiative of the coordinatory commission for hydromechanization in the Council for Hydraulic Affairs of the Academy of Sciences of the USSR. The All-Union MSES Hydromechanization Trust, the Mining Institute of the Academy of Sciences of the USSR and the Moscow oblast board of the Technological Department of the construction industry also participated in the organization of the conference, which was attended by more than 400 representatives of 149 organizations, including the Office of State Construction of the USSR, ministries, national economic councils, institutes of the Academy of Sciences of the USSR and the union republics, the ASiA of the USSR and the Ukrainian SSR, the

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Academies of Agricultural Science and the GNTK of the union republics, and official scientific and research institutes. The conference was opened by Academician A.M. Terpigorev, and at the plenary session papers were read by the following: Prof. A.P. Yufin, Doctor of Technical Sciences: "The State of Scientific Research Work in the Field of Hydromechanization"; Engineer V.A. Platanov: "The Construction of Alluvial Dams and the Work of Scientific Organizations"; Engineer H.A. Gorin: "The Present State of and the Outlook for Design and Research Work in the Field of Equipment for Hydromechanization"; Engineer S.B. Fogel'son: "Certain Problems of the Economy of the Hydromechanization of Earth Works"; Prof. G.A. Nurok, Doctor of Technical Sciences: "The Present State of and the Outlook for the Development of the Hydromechanization of Opencast Coalmining"; Engineer B.M. Shkundin: "Means of Perfecting Hydromechanization in the Non-Metallic Mineral Industry." The remainder of the

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conference was divided into 3 sessions: on technology, equipment and transport. At the session dealing with technology papers were read by the following: Prof. N.N. Maslov, Doctor of Technical Sciences: "Certain Problems in the Planning of Alluvial Dams"; P.L. Ivanov, Candidate of Technical Sciences (Institute of Mechanics of the Academy of Sciences of the USSR): "Peculiar Features of the Dilution and Compression of Sand Foundations"; P.D. Lobasov, Candidate of Technical Sciences (VNIIGS): "Piecemeal Alluvial Construction"; V.A. Melentyev, Candidate of Technical Sciences (B.E. Vedenoyev VNIIG) and V.P. Spiridin, Candidate of Technical Sciences (Institute of Mechanics of the Academy of Sciences of the USSR): "The Consolidation and Compression of the Foundations of the Key Parts of Earth Dams"; N.P. Kolpashnikov (GISI): "Research on Alluvial Construction by Means of Cohesive Foundations"; M.P. Kuzminov, Candidate of Technical Sciences: "The Hydraulic Construction of Earthworks by Means of Loess Foundations"; B.A. Volnin (V.V. Kuybyshev MISI): "The Alluvial Construction of the Sary-Yazynsk dam on the Murgab River by Means of Fine-Grained Sand"; I.Ya. Rusinov, Candidate of Technical Sciences (A.F. Mozhaisky VVIA): "Research into the Morphological Peculiarities of Sand Foundations"; Engineer I.A. Shneyer (SAOGIDEP) and N.I. Yakovlev (VNIIGiM): "Formulas for the Determination of the Angle of Inclination of Earth Foundations"; N.V. Zolatarev, Candidate of Technical Sciences: "A Method of Calculating the Thawing Rate of Frozen Foundations on the Upper Slope of Sand Dams when Constructed in Winter"; D.L. Melamut, Candidate of Technical Sciences (VNIIGiM), and Engineer K.P. Kopiyevskiy (GNTK of the Moldavian SSR): "Problems of Spanning Rivers Without the Use of Bankets";

Card 3/6

SHNEYER, I.A., kand.tekhn.nauk

Effect of the concentration of the hydraulic mixture on the density of sand placed by the hydraulic-fill method. Gidr. stroi. 30 no.4: 50-52 Ap '60. (MIRA 14:4)

(Dams)